

a rotor rotating about a rotating axis passing through the centers of the first and second wall surfaces within the rotating chamber, and including a hub with an outer circumferential surface and a vane protruding radially outwardly from the outer circumferential surface of the hub and having an outward radial tip which is slidably brought into close contact with the third wall surface of the rotating chamber, the vane further including a leading end which is slidably brought into close contact with the first wall surface of the rotating chamber, a trailing end which is slidably brought into close contact with the second wall surface of the rotating chamber, and inclines for connecting the leading and trailing ends; and

a pair of blocking walls cooperating with the vane and linearly moving upon rotation of the rotor, each of the blocking walls having an opposite edge facing each other, the opposite edges of the blocking walls being slidably brought into close contact with both side surfaces, other edges of the blocking walls adjacent the opposite edges being slidably brought into close contact with the outer circumferential surface of the hub of the rotor;

wherein a suction port for suction of a fluid and a discharge port for discharge of the fluid are provided at both positions adjacent to the pair of the blocking walls which are interposed between the ports;-

wherein the third wall surface of the rotating chamber is provided with a suction groove positioned adjacent to the pair of the blocking walls and connected to the suction port to connect both spaces separated by the vane to each other, and a discharge groove positioned adjacent to the pair of the blocking walls and connected to the discharge port to connect the both spaces separated by the vane to each other.

178. A fluid motor, comprising:

a rotating chamber defined by first and second opposite wall surfaces and a third cylindrical wall surface for connecting the first and second wall surfaces to each other;

a rotor rotating about a rotating axis passing through the centers of the first and second wall surfaces within the rotating chamber, and including a hub with an outer circumferential surface and a vane protruding radially outwardly from the outer circumferential surface of the hub and having an outward radial tip which is slidably brought into close contact with the third wall surface of the rotating chamber, the vane further

including a leading end which is slidably brought into close contact with the first wall surface of the rotating chamber, a trailing end which is slidably brought into close contact with the second wall surface of the rotating chamber, and inclines for connecting the leading and trailing ends; and

a pair of blocking walls cooperating with the vane and linearly moving upon rotation of the rotor, each of the blocking walls having an opposite edge facing each other, the opposite edges of the blocking walls being slidably brought into close contact with both side surfaces, other edges of the blocking walls adjacent the opposite edges being slidably brought into close contact with the outer circumferential surface of the hub of the rotor;

wherein an inlet port for inflow of a fluid and an outlet port for outflow of the fluid are provided at both positions adjacent to the pair of the blocking walls which are interposed between the inlet and outlet ports;

wherein the third wall surface of the rotating chamber is provided with an inflow groove positioned adjacent to the pair of the blocking walls and connected to the inlet port to connect both spaces separated by the vane to each other, and an outflow groove positioned adjacent to the pair of the blocking walls and connected to the outlet port to connect the both spaces separated by the vane to each other~~The fluid pump as claimed in any claims 1 to 7, wherein the pair of blocking walls have contact members that are brought into contact with both side surfaces of the vane, and each of the pair of blocking walls is provided with a receiving groove for receiving the contact member and a passage hole for causing the receiving groove to communicate with a discharge side.~~

1924. The fluid motor as claimed in claim 17, wherein the leading and trailing ends of the vane are formed to be brought into surface contact with the first and second wall surfaces of the rotating chamber, and the width of a radial tip of each of the leading and trailing ends of the vane is formed to be larger than a maximum distance between the corresponding inflow and outflow groove~~The fluid motor as claimed in claim 18, wherein the pair of the blocking walls is formed integrally with each other.~~

In the amendment of the specification, the term of “guide” has been amended to “wing” in the 7th and 11th lines on page 31 in the published PCT application.

In the amendment of the drawings, reference number “9631” and an indicating line therefor have been added in Fig.3. It is noted that the amendment to the drawings is supported by the detailed description and drawings in the original specification.

If the Examiner has any questions regarding this amendment or other matters in connection with the above-referenced PCT International Application, the Examiner is requested to contact undersigned Patent Attorneys.

CHAE & SONG Patent & Trademark Office

Patent Attorney Hochan SONG

Yoon CHAE

constructed by mounting a check valve for preventing backflow of the fluid within each discharge tube.

Figs. 15 to 17 are views of a main body of a fluid pump according to a third embodiment of the present invention. Referring to Figs. 15 to 17, a suction tube 15b is
 5 branched off into two passages which in turn are connected to sides of wing portions 28 of two end walls 22b and 24b of the housing 20b. A discharge tube 16b is also branched off into two passages which in turn are connected to sides of the wing portion 28b of the two end walls 22b and 24b of the housing 20b. The housing 20b is the same as the housing 20b of the fluid pump of the aforementioned second embodiment in their
 10 constitutions except that the housing 20b does not have the suction groove 261a, the discharge groove 262a and the passage holes 282a at both ends of the wing portion 28a. Therefore, a detailed description thereof will be omitted.

Referring to Figs. 16 and 17, a linear moving object 50b has a structure substantially similar to that of the linear moving object 50 of the first embodiment shown in Fig. 5. The linear moving object 50b includes two contact members 58b that
 15 are slidably fitted at opposite positions in two blocking walls 54b and 56b, respectively, and slide against a vane (not shown). Each of the blocking walls 54b and 56b is provided with a receiving groove 511b into which the contact member 58 is fitted, a passage hole 512b communicating with the receiving groove 511b, and a connecting
 20 groove 59b. The receiving grooves 511b are open while facing each other at opposite ends of the two blocking walls 54b and 56b and also open upwardly at upper ends 541b and 561b of the two blocking walls 54b and 56b. The passage holes 512b are formed on discharge sides of the blocking walls 54b and 56b to communicate with the respective receiving grooves 511b. A high-pressure fluid on the discharge sides is
 25 supplied to the receiving grooves 511b through the passage holes 512b. The connecting grooves 59b are formed on suction sides of the blocking walls 54b and 56b. Each connecting groove 59b connects both ends of each of the blocking walls 54b and 56b. A low-pressure fluid on the suction sides are supplied to guide passages 281b through the connecting grooves 59b to cause the linear moving object 50b to move
 30 smoothly.